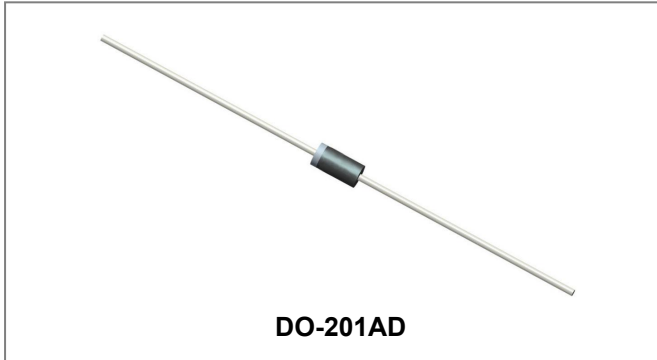


## 1.5KE6.8A THRU 1.5KE250A TRANSIENT VOLTAGE SUPPRESSOR



### Features

- Glass Passivated Die Construction
- 1500W Peak Pulse Power Dissipation
- Uni-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-0
- This is a Pb – Free Device
- All SMC Parts are Traceable to the Wafer Lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: JEDEC DO-201AD Low Profile Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Weight: 1.10 grams(approx.)

### Maximum Ratings and Thermal Characteristics@T<sub>A</sub>=25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at T <sub>A</sub> =25°C (Fig.1)(Note 1, 2, 5)	P <sub>PPM</sub>	1500	W
Peak Forward Surge Current (Note 3)	I <sub>FSM</sub>	200	A
Steady State Power Dissipation(Note 2, 4)	P <sub>M(AV)</sub>	5.0	W
Typical Thermal Resistance Junction to Lead	R <sub>θJL</sub>	15	°C/W
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	75	°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to 175	°C

- Notes:**
1. Non-repetitive current pulse, per Fig. 3 and derated above T<sub>A</sub> = 25°C per Fig. 2.
  2. Mounted on 20mm<sup>2</sup> copper pad.
  3. Measured on 8.3ms single half sine wave or equivalent square wavefor unidirectional device only.
  4. Lead temperature at 75°C=T<sub>L</sub>.
  5. Peak pulse power waveform is 10x1000 μ s.

**Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified**

UNI-POLAR	REVERSE STAND-OFF VOLTAGE V <sub>RWM</sub> (V)	BREAKDOWN VOLTAGE V <sub>BR</sub> (V) MIN. @I <sub>T</sub>	BREAKDOWN VOLTAGE V <sub>BR</sub> (V) MAX. @I <sub>T</sub>	TEST CURRE NT I <sub>T</sub> (MA)	MAXIMUM CLAMPING VOLTAGE @I <sub>PP</sub> V <sub>C</sub> (V)	PEAK PULSE CURRENT I <sub>PP</sub> <sup>(1)</sup> (A)	REVERSE LEAKAGE @V <sub>RWM</sub> I <sub>R</sub> (uA)
1.5KE6.8A	5.8	6.45	7.14	10	10.5	144.8	1000
1.5KE7.5A	6.4	7.13	7.88	10	11.3	134.5	500
1.5KE8.2A	7.02	7.79	8.61	10	12.1	125.6	200
1.5KE9.1A	7.78	8.65	9.5	10	13.4	113.4	50
1.5KE10A	8.55	9.5	10.5	1	14.5	104.8	10
1.5KE11A	9.4	10.5	11.6	1	15.6	97.4	5
1.5KE12A	10.2	11.4	12.6	1	16.7	91	5
1.5KE13A	11.1	12.4	13.7	1	18.2	83.5	5
1.5KE15A	12.8	14.3	15.8	1	21.2	71.7	5
1.5KE16A	13.6	15.2	16.8	1	22.5	67.6	5
1.5KE18A	15.3	17.1	18.9	1	25.2	60.3	5
1.5KE20A	17.1	19	21	1	27.7	54.9	5
1.5KE22A	18.8	20.9	23.1	1	30.6	49.7	5
1.5KE24A	20.5	22.8	25.2	1	33.2	45.8	5
1.5KE27A	23.1	25.7	28.4	1	37.5	40.5	5
1.5KE30A	25.6	28.5	31.5	1	41.4	36.7	5
1.5KE33A	28.2	31.4	34.7	1	45.7	33.3	5
1.5KE36A	30.8	34.2	37.8	1	49.9	30.5	5
1.5KE39A	33.3	37.1	41	1	53.9	28.2	5
1.5KE43A	36.8	40.9	45.2	1	59.3	25.6	5
1.5KE47A	40.2	44.7	49.4	1	64.8	23.5	5
1.5KE51A	43.6	48.5	53.6	1	70.1	21.7	5
1.5KE56A	47.8	53.2	58.8	1	77	19.7	5
1.5KE62A	53	58.9	65.1	1	85	17.9	5
1.5KE68A	58.1	64.6	71.4	1	92	16.5	5
1.5KE75A	64.1	71.3	78.8	1	103	14.8	5
1.5KE82A	70.1	77.9	86.1	1	113	13.5	5
1.5KE91A	77.8	86.5	95.5	1	125	12.2	5
1.5KE100A	85.5	95	105	1	137	11.1	5
1.5KE110A	94	105	116	1	152	10	5
1.5KE120A	102	114	126	1	165	9.2	5
1.5KE130A	111	124	137	1	179	8.5	5
1.5KE150A	128	143	158	1	207	7.3	5
1.5KE160A	136	152	168	1	219	6.9	5
1.5KE170A	145	162	179	1	234	6.5	5
1.5KE180A	154	171	189	1	246	6.2	5
1.5KE200A	171	190	210	1	274	5.5	5
1.5KE220A	185	209	231	1	328	4.6	5
1.5KE250A	214	237	263	1	344	4.4	5

For bidirectional type having V<sub>rwm</sub> of 10 volts and less, the IR limit is double.

For parts without A, the VBR is ±10%.

Notes: 1. Surge waveform:10/1000µs.

**Ratings and Characteristics Curves**

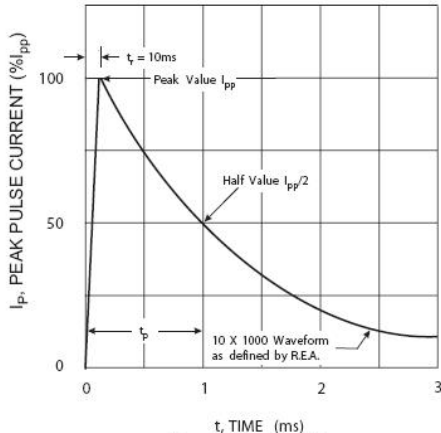


Fig. 1 Pulse Waveform

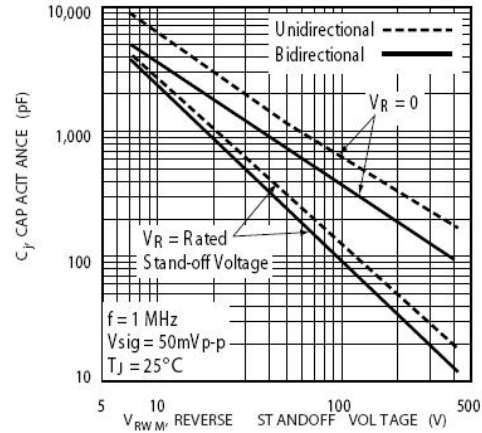


Fig. 2 Typical Junction Capacitance

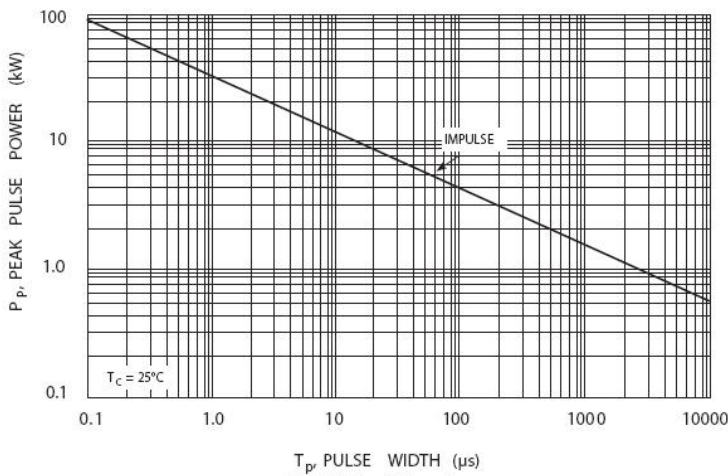


Fig. 3 Pulse Rating Curve

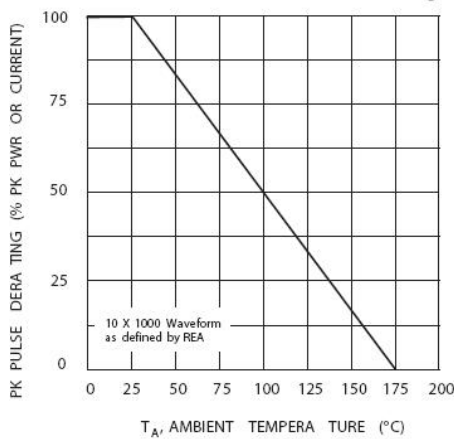


Fig. 4 Pulse Derating Curve

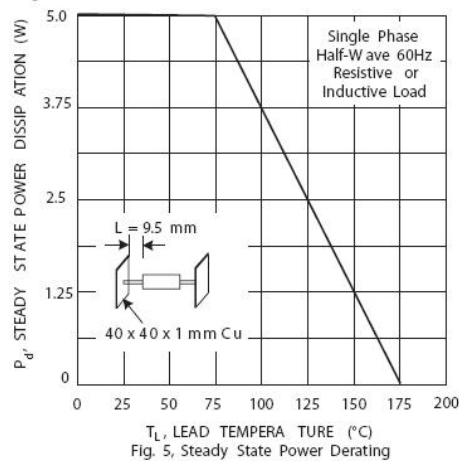
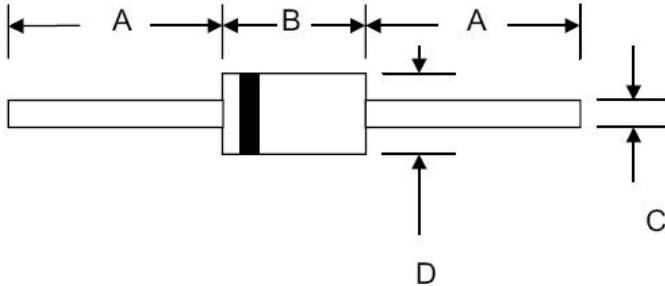


Fig. 5 Steady State Power Derating

## Mechanical Dimensions DO-201AD



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	24.0	-	0.945	-
B	7.20	9.50	0.265	0.374
C	0.96	1.07	0.038	0.042
D	4.80	5.30	0.190	0.210

## Ordering Information

Device	Package	Shipping
1.5KE6.8A THRU 1.5KE250A	DO-201AD (Pb-Free)	1250pcs / tape
1.5KE6.8ATA THRU 1.5KE250ATA	DO-201AD (Pb-Free)	1250pcs / tape
1.5KE6.8ATR THRU 1.5KE250ATR	DO-201AD (Pb-Free)	1250pcs / reel

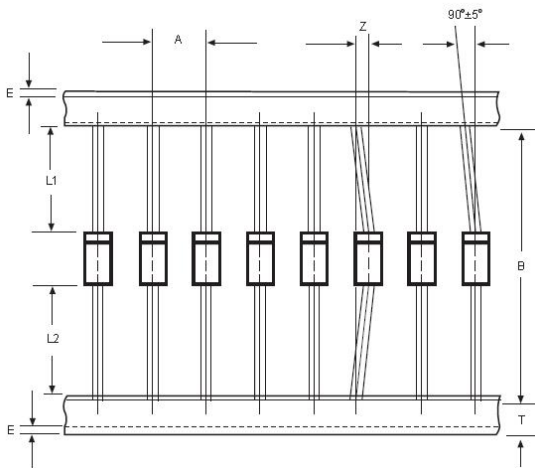
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram



1.5KE6.8A = Part Name  
Note: Starting from the 16XXX will not mark date code.

## Carrier Tape Specification DO-201AD



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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